

out until a concentration of tetrafluoroethylene dispersed particles in said aqueous medium is from 15 to 40 mass%.

18. (New) The process according to Claim 1, wherein said polymerizing is carried out under an acidic condition.

19. (New) The process according to Claim 1, wherein said tetrafluoroethylene is polymerized alone or together with a comonomer.

20. (New) The process according to Claim 19, wherein an amount of said comonomer is at most 1 mass%.

BASIS FOR THE AMENDMENT

The specification has been amended at page 1, lines 9-13, for clarity as requested by the Examiner.

Claims 1 and 10 have been amended to correct minor informalities.

New Claims 12-20 have been added.

New Claim 12 is supported at page 7, last line.

New Claim 13 is supported at page 8, line 3.

New Claim 14 is supported at page 8, line 15.

New Claim 15 is supported at page 8, line 22.

New Claim 16 is supported at page 9, line 25.

New Claim 17 is supported at page 10, lines 4-7.

New Claim 18 is supported at page 10, line 9.

New Claim 19 is supported at page 10, lines 15-19.

New Claim 20 is supported at page 11, line 2.

No new matter is believed to have been added by entry of this amendment. Entry and

favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 1-20 will now be active in this application.

INTERVIEW SUMMARY

Applicants wish to thank Examiner Hu and Supervisory Examiner Wu for their helpful and courteous discussion with Applicants' Representative on June 9, 2003. During this discussion it was noted that the present invention does not inherently comprise bisulfite ions such as those disclosed by Malhotra et al.

REQUEST FOR RECONSIDERATION

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

The present invention as set forth in **amended Claim 1** relates to a process for producing a tetrafluoroethylene polymer, comprising:

polymerizing tetrafluoroethylene in an aqueous medium in the presence of a dispersant, a stabilizer and a polymerization initiator;

wherein the polymerization initiator is a **redox polymerization initiator comprising a halogen acid salt YXO_3 /a sulfite Z_2SO_3** ;

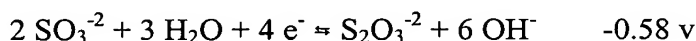
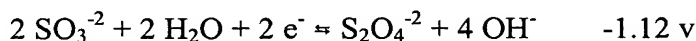
wherein X is a chlorine atom, a bromine atom or an iodine atom, Y is a hydrogen atom, ammonium, an alkali metal or an alkaline earth metal, and Z is ammonium, an alkali metal or an alkaline earth metal.

Malhotra et al fail to disclose or suggest a process for producing a tetrafluoroethylene polymer, as claimed, in which the polymerization initiator is a **redox polymerization initiator comprising a halogen acid salt YXO_3 /a sulfite Z_2SO_3** .

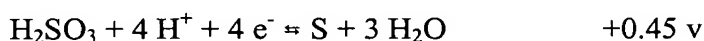
Malhotra et al disclose a bromate/bisulfite redox initiator system for polymerizing tetrafluoroethylene to make resins (Malhotra et al, abstract). Since the claimed sulfite is different from a bisulfite, the claimed invention cannot be anticipated by Malhotra et al. In addition, Applicants wish to point out that the present invention requires sulfite in the initiator system, while Malhotra et al do not disclose the claimed redox system having sulfite.

Furthermore, a redox initiator system is a two component system using two component initiators which undergo electron transfer. One component is reduced and the other oxidized, as a result of which, at least one species forms free-radicals capable of initiating polymerization.

The claimed redox system comprises a bromate as an oxidizing component and a sulfite as a reducing component, not a bisulfite as in Malhotra et al. The reduction potentials for sulfite reduction is much different than the reduction potential for a bisulfite (see enclosed passage from the CRC Handbook of Chemistry and Physics, 56th edition). The reduction potentials for sulfite are as follows:



The reduction potentials for bisulfite are as follows:



Accordingly while the reduction potential for sulfite is from -0.58 to -1.12 v, the reduction potential for bisulfite is much lower. As such, the difference in redox potentials between the oxidizing component of bromate and the reducing component is much greater for the claimed sulfite system than for the bisulfite system of Malhotra et al. The sulfite and the bisulfite ion are not present in the same redox equilibrium as shown above, and the reduction

potentials are very different for both systems. Under acidic conditions, the above equilibria shift to either side but there is no equilibrium of sulfite and bisulfite. Thus, the present invention is not anticipated by or obvious over Malhotra et al.

Gould does not cure the defect of Malhotra et al because it also fails to disclose an equilibrium between sulfite and bisulfite in the claimed redox system.

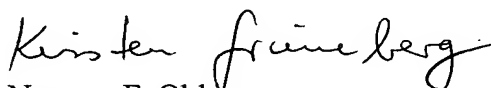
Therefore, the rejection of Claims 1-11 under 35 U.S.C. §102(b) as anticipated by Malhotra et al as evidence by Gould is believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

Applicants respectfully request the Examiner to acknowledge on the record that the references cited in the **Information Disclosure Statement, filed herewith**, have been considered.

Applicants submit that the present application is now in condition for allowance and early notice of such action is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Norman F. Oblon
Attorney of Record
Registration No.: 24,618

Kirsten A. Grueneberg, Ph.D.
Registration No.: 47,297



22850

PHONE NO.: (703) 413-3000

FAX NO.: (703) 413-2220

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IN THE SPECIFICATION

Please amend the specification as follows:

Please amend the paragraph at page 1, lines 9-13, to read as follows:

--Heretofore, tetrafluoroethylene homopolymer (PTFE) has been obtained by polymerizing tetrafluoroethylene (hereinafter referred to as TFE) [alone or] while tetrafluoroethylene copolymer has been obtained by polymerizing [it] tetrafluoroethylene together with a copolymerizable modifying monomer[, as the case requires], and [has] both have been used for various purposes.--

IN THE CLAIMS

Please amend the Claims as follows:

--1. (Amended) A process for producing a tetrafluoroethylene polymer, [which comprises] comprising:

polymerizing tetrafluoroethylene in an aqueous medium in the presence of a dispersant, a stabilizer and a polymerization initiator[,];

wherein the polymerization initiator is a redox polymerization initiator comprising a halogen acid salt YXO_3 /a sulfite Z_2SO_3 ;

wherein X is a chlorine atom, a bromine atom or an iodine atom, Y is a hydrogen atom, ammonium, an alkali metal or an alkaline earth metal, and Z is ammonium, an alkali metal or an alkaline earth metal.

10. (Amended) The process for producing a tetrafluoroethylene polymer according to Claim 1, wherein the dispersion [is] comprises a [surfactant of a] fluorocarbon surfactant [type].--

Claims 12-20. (New)